

REMARKS

Claims 1- 10, 13-14 and 21-46 are pending herein. Claims 1 has been amended and claims 21-46 have been added to more clearly recite the subject matter of the present invention. No new matter has been added. In light of the foregoing amendments and the following remarks, Applicants request reconsideration and allowance of all pending claims.

Claims 1-6, 8-11 and 13 and 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Nussinovitch (6,068,867) et al in view of Soon-Shiang et al (5,762,959) and Dorian et al (5,693,514). Claim 7 has been rejected over the references as applied to the claims above and further in view of Jorgensen et al (5,293,838).

The present invention, as recited in amended independent claim 1 is for a method of uniform hydrocolloid coating of a single animal cell and embryo.

In the references cited by the Examiner, a coating of a single individual cell was never performed. Dorian and Soon-Shiong merely entrap thousands of cells and Nussinovitch merely coats a vegetative or animal tissue. This is not the same as the coating of a single cell. When dealing with one cell, electrostatic attraction or repulsion are much more pronounced. This is less problematic when dealing with many cells contained in a bead, or when coating a tissue.

Claim 1 and claim 28 require that the egg or an embryo be sucked into a capillary. Since the cell is the same size as of the capillary and in a case of embryo the diameter of the capillary is at times smaller than the cell, a very thin individual coating is forced to be produced. As required by claim 21, the cell or embryo to be coated is maneuvered by a thin capillary having an approximate or smaller diameter than the diameter of the cell, in such a manner that the coating is forced to perform with a minimal thickness and volume.

Dorian et al. used an electrostatic apparatus (page 4, line 65 and Figures 1 and 2). The voltage used can harm cells and embryos. This facilitates the spraying which is not necessary Applicant's invention.

As stated in the claims, the thickness of our coating is minimal. This cannot be achieved through the use of the referenced patents due to their procedure. In the background on page one of the Application, it is mentioned that during methods similar to what was described by Dorian et al., only 6.5% of the volume of the formed bead is occupied by the cells, which is of course in contradiction with the situation achieved by Applicant's invention, where the cell comprises ~95 to 99% of the volume. This distinction has been added to claims 1 and 28.

As also mentioned in the text: "even if the cells (those that were used in Dorian's patent) are evenly distributed throughout the gel volume, each individual cell is coated by a very thick layer of gel, in comparison to its own natural dimensions". None of the prior art references disclose that the thickness of the coating consisted of only a small fraction of the cell's diameter as required by claims 1 and 28.

Therefore, the cited prior art, alone or in combination, do not anticipate or obviate Applicant's invention as defined by the amended claims. Therefore the claims are allowable and the rejection under 35 U.S.C. §102 and §103 should be withdrawn.

In view of the above amendments it is submitted that the Examiner's rejections have been overcome and should be withdrawn and the present application should now be in condition for allowance.

In light of the amendments and the remarks, Applicant requests early and favorable action on the merits.

Should any changes to the claims and/or specification be deemed necessary to place the application in condition for allowance, the Examiner is respectfully requested to contact the undersigned to discuss the same.

This Amendment is believed to be timely filed. If a petition for extension of time and/or any other fees are required, the Patent and Trademark Office is specifically authorized to charge such fee to Deposit Account No. 50-0518 in the name of Steinberg & Raskin, P.C.

An early and favorable action on the merits is earnestly solicited.

Respectfully submitted,
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